

# ABOVE WG Coordination & Synthesis Activities

## Carbon Dynamics:

Changes in seasonal amplitude of CO<sub>2</sub> concentrations

CH<sub>4</sub> data/knowledge gaps

Aquatic carbon fluxes

Partitioning net ecosystem exchange components

C Flux measurements in permafrost ecosystems (*with Hydrology/Permafrost WG*)



## Hydrology / Permafrost:

Active Layer Distribution - synthesize & assess active layer depths (*with SAR WGs*)

Freeze-thaw dynamics and timing (*with C Dynamics WG*)

Lake trends – comparison of methods & long-term trends in lake area, and drivers

Snow properties – crosscutting synthesis activity *with Wildlife WG*

## Fire Disturbance:

Wildfire soil carbon combustion synthesis

Post-fire forest regrowth composition & trajectories (*with Veg Dynamics WG*)

## Vegetation Dynamics:

Succession/recovery following disturbances (*with Fire WG*)

Forest greening/browning including role of climate & insects in forest decline

Tundra greening/browning including shrub expansion & densification



# Breakout 2 charge

Discuss research synthesis ideas & activities.

Consider synergies & ways to inform & leverage efforts.

If possible, outline contents of publications as a working framework.

- **Field mmts & remote sensing**
  - What are the key knowledge gaps & needs?
  - Ways to fill primary data gaps & needs?
  - Complementarity in mapping & scaling efforts?
  - How can data / observations inform management needs?
- **Modeling efforts**
  - Broader suite of *in situ* mmts for cal-val?
  - What data are lacking wrt informing & assessing models?
  - How can models best inform vulnerability assessments?
  - Model-data framework, comparisons, benchmarking

# Breakouts (rooms)

## ➤ 5 breakout groups

1. Wildlife & Ecosystem services (Boelman, North)
2. Fire Disturbance (Mack, East)
3. Vegetation dynamics (Goulden, Municipal / Superior)
4. Carbon dynamics (Natali or Commane, Federal)
5. Hydrology & Permafrost (Watts, South)

Self-select to breakouts (diversify if possible)

- If you have multiple project participants, go to different WGs

Assign / volunteer a rapporteur